

THE GREAT YARMOUTH
URBAN & PORT SANITARY
AUTHORITY.



THE
ANNUAL REPORT
OF THE
Medical Officer of Health,
FOR 1900.

PRINTED BY ORDER OF THE SANITARY AUTHORITY.

GREAT YARMOUTH :
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1901.

TOWN HALL,

GREAT YARMOUTH,

May, 1901.

TO THE MAYOR, ALDERMEN AND COUNCILLORS OF THE COUNTY
BOROUGH OF GREAT YARMOUTH.

GENTLEMEN,

In accordance with the requirements of the Local Government Board, I have the honour to present to you the Annual Report of the Medical Officer of Health for the year ending December 31st, 1900.

I am, Gentlemen,

Yours obediently,

CHARLES H. RUSSELL,

Medical Officer of Health.

STATISTICAL.

AREA.

The Total Area of the Municipal Borough is equal to 4534.226 acres, but excluding the Foreshore and Tidal Waters the Area of the town proper is 3567.902 acres, *i.e.*, the amount of land on which Great Yarmouth stands.

POPULATION.

It is extremely difficult to estimate correctly the population of a town which, like Great Yarmouth, depends to a great extent on its annual summer influx of visitors, and this being my first year as your Medical Officer of Health I have purposely delayed the production of my Report until the census returns of this year were at hand, in order that I might have something definite to act upon.

The time of the year (April 1st) at which the census is taken does not to my mind give a fair estimate of the population of this town ; were it taken a month later in the year our numbers, apart from bona-fide visitors would, I am firmly convinced, be considerably increased.

Although the number of our visitors must have a very appreciable influence on our annual Death Rate, we are not entitled to include them in any way in the estimates of population ; but there is another class which I think should decidedly be included. During the winter months a certain number of lodging and boarding houses are closed and the inmates migrate to other towns, and the staff of all the hotels is considerably reduced during the same period ; all these people returning to the town during May and remaining until about the end of September. These are classed by the Registrars of Births and Deaths as inhabitants of the town and not as strangers, and yet owing to the early period at which the census is taken are not included in the population. This obviously must have a deleterious effect on the death rate.

I therefore propose to take as the population for the middle of last year, the number as returned by the last census, viz., 51,250 ; but as I have previously pointed out this must be considered a very low estimate of the population of Great Yarmouth for a large portion of the year. The Death Rate calculated on this population must compare unfavourably with that of previous years, inasmuch as the population for some years past has been apparently over-estimated. (See Table 1, Page 26.)

The number of persons apportioned to the various Districts of the Borough is as follows :—

| | | | |
|-------------------------------|-------|----|--------|
| Northern District | .. | .. | 19,767 |
| Southern District .. — | — | .. | 15,427 |
| Gorleston and Southtown | .. | .. | 15,255 |
| Runham | .. | .. | 612 |
| Floating Population | .. | .. | 189 |
| | | | — |
| | Total | | 51,250 |
| | | | — |

BIRTHS.

The total number of Births registered within the Borough during the year numbered 1,396, of which number 724 were males and 672 females, giving a Birth Rate for the entire Borough of 27.24 as compared with the average for the last ten years of 28.74. The Births recorded in the various Districts of the Borough were as follows :—

| | | Males. | Females. | Total. | Rate. |
|-------------------------------|----|--------|----------|--------|-------|
| Northern District | .. | 256 | 298 | 554 | 28.02 |
| Southern District | .. | 156 | 169 | 325 | 21.06 |
| Gorleston and Southtown | .. | 117 | 130 | 247 | 16.19 |
| Runham | .. | 4 | 5 | 9 | 14.7 |

There were 84 Illegitimate Births included in the above totals.

DEATHS.

The total number of Deaths from all causes, including those of visitors to the town, registered during the year amounted to 1,135, of which 533 were males and 602 females, giving a Death Rate of 22.14 per thousand of the population for the entire

Borough as compared with 18.5 in the previous year, and 19.10 the average for the last ten years; but these rates, as I have previously pointed out, are lower than should be the case owing to the population having been continuously over-estimated.

Out of the total number of Deaths 60 were those of visitors to the town, which leaves a Death Rate for the inhabitants proper of 20.09 per thousand.

The increase in the Death Rate over that in previous years is to a great extent accounted for by the epidemic of Influenza that prevailed here during the first two months of the year, this being directly responsible for 69 Deaths. It is highly probable also that several of the deaths from Respiratory Diseases were due in the first instance to Influenza, the determining cause, owing to the late summoning of medical assistance not being ascertained.

The Death Rates allocated to the various Sub-Districts of the Borough are as follows :—

| | | | |
|-------------------------|----|----|-------|
| Northern Sub-District | .. | .. | 26.5 |
| Southern Sub-District | .. | .. | 19.3 |
| Gorleston and Southtown | .. | .. | 16.05 |
| Runham | .. | .. | 14.7 |

The larger Death Rate in the Northern Sub-District as compared with that in the other Districts is due in a great extent to the presence of the Workhouse, the overcrowding on space of the inhabitants, and the increased Infantile Mortality (see Table 2).

In the Workhouse alone there were 112 Deaths, it being impossible to allocate the greater number of these to the various Districts, as the places of former residence of the deceased were not mentioned.

AGE AND RELATION TO DEATHS.

Of the total number of 1075 deaths registered amongst the inhabitants proper, 277 occurred under the age of one year, 122 between one and five years, 97 between five and twenty-five, 227 between twenty-five and sixty-five, and 352 among persons exceeding sixty-five years of age.

INFANTILE MORTALITY.

The Infantile Mortality is calculated upon the number of deaths occurring under twelve months of age to one thousand Births.

The deaths of infants under one year of age amounted to 277, which gives a mortality under this heading of 198 per thousand births, as compared with 169 in 1899, and 173 the average for the past ten years.

The mortality among children born in wedlock was 190 per thousand births, whilst the illegitimate children perished at the rate of 322 per thousand.

Out of the total of 277 Infant deaths, 48 were due to premature birth, 44 to Bronchitis and Pneumonia, 44 to Diarrhoea, 23 to Whooping-cough, 5 to Measles, 11 to Tuberculosis, and the remainder to other causes.

Enquiries were made at the residences of those children dying from Diarrhoea, as to the method of feeding and the sanitary arrangements of the house. Thirty-seven of the children had been fed by hand, in most instances with anything that the parents themselves happened to be eating, pieces of bread, meat, mashed potato and gravy, and bread sop forming their staple diet. It is not surprising, therefore, that these hapless children succumbed to the disease.

In order to educate the parents in the proper method of feeding their children, a pamphlet containing the necessary instructions was printed and circulated; every woman registering a birth was presented with one of these circulars by the Sub-Registrars, to whom I have to tender my thanks for their ready help in this matter.

ZYMOTIC DEATH RATE.

This is calculated upon the number of deaths resulting from the seven principal Infectious Diseases, viz. :—Small Pox, Scarlet Fever, Whooping Cough, Typhoid Fever, Measles, Diphtheria, and Diarrhoea. The total amounted to 161, which shows a slight decrease on the number recorded during 1899, viz.,—179.

The Zymotic Death Rate for the year was 3.14, as compared with 3.37 in 1899, and 2.84 the average for the past ten years.

I append a table showing the comparison between the mortality of the various Infectious Diseases for 1899 and 1900.

| | | 1900. | 1899. |
|----------------|----|-------|-------|
| Diphtheria | .. | 39 | 55 |
| Typhoid Fever | .. | 12 | 26 |
| Small Pox | .. | 0 | 1 |
| Measles | .. | 17 | 24 |
| Whooping Cough | .. | 45 | 4 |
| Diarrhoea | .. | 47 | 64 |
| Scarlet Fever | .. | 0 | 4 |

From the above table it will be seen that the Town, except in the single exception of Whooping Cough, showed a decided decrease in the deaths from Infectious Diseases.

Action taken to Prevent the Spread of Infection.—

Immediately on the receipt of a Notification Certificate, the residence of the Patient was at once visited, and answers to the following questions were obtained :—

| | |
|--|-------------------------|
| Disease | Date |
| Notified by Dr. .... | ..... |
| Name..... | Age |
| Address ..... | ..... |
| Onset ..... | ..... |
| House or Shop..... | ..... |
| Adults | Children..... |
| Occupation of Patient ..... | ..... |
| Occupation of Guardian or others ..... | ..... |
| Laundry ..... | ..... |
| School Patient..... | When last there ? |
| Other Schools ..... | ..... |
| Reputed cause of illness ..... | ..... |
| Any of them had Disease ? ..... | ..... |
| Any business carried on ? ..... | ..... |
| Any of them gone out to stay ?..... | ..... |
| No. of bedrooms ? ..... | ..... |
| Milk supply..... | Water..... |
| Patient removed to I.H. ? | Date |
| Or how isolated ? ..... | ..... |

Attended at I.H. by Dr.
 W.C. or privy?
 Any sanitary defects or remarks?
 Owner
 Address
 Date..... Inspector.....

At the request of the parents or guardians, or in the event of it being found impossible to isolate the case at home, it was immediately removed in the Borough ambulance to the Isolation Hospital. All children from the infectious house were prohibited from attending school until the length of the incubation period of the disease had elapsed, or in the case of those patients nursed at home, until after the recovery of the patient plus the incubation period. Notices were sent out to this effect to the Managers of both the Day and Sunday Schools, stating the date of exclusion from attendance and the time of re-admission.

Immediately on the recovery or removal of the patient, all the infected bedding and soft materials were taken to the Corporation's Steam Disinfector, disinfected and returned free of any charge.

The infected room or rooms were then sprayed with a solution of Perchloride of Mercury, of a strength of 1 in a 1000, and subsequently fumigated with Sulphur-Di-oxide gas.

I am pleased to be able to report that in scarcely a single instance where removal to Hospital was found to be necessary, was any serious opposition made to the patient's removal.

The following is an analysis of the various Infectious Diseases occurring in the Borough during 1900.

SMALL POX.

No case of this disease occurred during the year.

DIPHTHERIA.

There were in all 203 Diphtheria notifications received for the whole year as compared with 245 cases which occurred during 1899.

During the early months of the year we were practically free from the disease, the average number of cases for the first six months being only four a month, but from July onwards the numbers steadily increased, reaching a climax in December, in which month 60 notifications were received.

Diphtheria up to the year 1897 was met with but seldom in this town, but since that time it has become endemic with us, with periodical exacerbations reaching almost to epidemic form. These increases are the penalty which Yarmouth has to pay for its popularity as a seaside resort, for they almost invariably commence during the visiting season, when the housing accommodation is strained to the utmost. The explanation of this increase is easily conceivable, for Diphtheria, one might almost say unfortunately, very often occurs in such a mild form that the parents consider the child is only suffering from a slight cold, and is taken to the sea-side for a "change of air," but even the mildest type may give rise to a fatal attack in other persons. In this town too, as I have often pointed out to you, extraordinary facilities are offered in certain districts for the spread of any infectious disease which may occur, the enormous overcrowding of houses on space, with the extreme narrowness of the courts, alleys, and passages, and even of the streets, in which the children are brought into intimate contact with one another, all tending to lower the general tone of the health of the people residing in those districts, and render them less able to resist the attack of any infection with which they may be brought in contact. It is instructive to note that the disease has almost invariably occurred amongst the poorer class of the population, and in the overcrowded districts of the town.

The number of deaths from Diphtheria during the year was 38, this giving a case mortality of 18.7 per cent. as compared with 22.4 per cent. in 1899, i.e., out of every 100 cases notified 18 died. This mortality would have been considerably reduced but for the regrettable delay on the part of parents and guardians in summoning medical assistance. This supposition is, to my mind, conclusively proved by the fact that out of the total number of

deaths which occurred, all the patients, with the exception of two, had been ill three days or more before medical advice was sought.

It is interesting to note the following case as indicating one of the channels by which this disease may be conveyed.

On October 25th I received information that a case of Diphtheria was existent at a dairy farm just outside the Borough boundary, milk was being supplied from this farm to various houses in the town.

I immediately visited the farm and found the patient, a boy aged 12 years, suffering from well-marked Diphtheria. He was confined to his bed, and was being attended to by the person who had charge of the dairy. All the milk found on the premises was at once destroyed, and the sale of milk stopped until the patient had been removed to hospital, and the premises thoroughly disinfected.

Within a week from this date four cases of Diphtheria occurred at various houses which had received their milk supply from this dairy.

SCARLET FEVER.

Only 42 cases of Scarlet Fever were reported, and these were all of a mild type. No deaths from this disease occurred during the year.

TYPHOID FEVER.

There were reported 123 cases of Typhoid Fever for the last year, and 13 deaths occurred, this giving a case mortality of 10.5 per cent. as compared with 131 cases, 26 deaths, and a mortality of 19.8 per cent. in 1899.

Almost two-thirds of the total number of cases occurred during October and the first week of November, 75 patients contracting the disease during this period. You will remember that I presented a report to you at this time setting out what I considered to be the causes of the outbreak, and the measures that should be taken in order to stamp out the disease. For the sake of reference I include it in this report as it indicates clearly the conditions which to my mind are mainly responsible for our periodical outbreaks.

HEALTH DEPARTMENT,
TOWN HALL.

TO THE CHAIRMAN AND MEMBERS OF THE SANITARY
COMMITTEE.

GENTLEMEN,

During the fortnight ending Monday last, October 15th, there has been a marked increase in the number of cases of typhoid fever occurring in this town, which when compared with the numbers for the previous months of this year is very decided. I have therefore considered it my duty to make a special report to you on the subject, setting forth the conditions which, after careful consideration, I attribute as being responsible for the outbreak.

For the first 9 months of this year, only 43 cases of typhoid fever were notified, or an average of between 4 and 5 cases a month, the numbers in August and September being 9 and 10 respectively, this showing a gradual increase in the cases during the warmer months. In the first week of October 17 cases were notified, and in the second week there were 7 cases. I found on inquiry that all these 24 patients were taken ill at or about the same time, viz.: the 1st day of October; this clearly indicating the existence of one common source of infection, and as the incubation period of typhoid fever (*i.e.* the length of time which elapses between the absorption of the poison and the commencement of the symptoms) varies from 10 to 21 days, we must look to something occurring about the end of the second week in September as the source of infection.

An outbreak of typhoid fever is usually due to one or more of the four following conditions:—

- (i.) A common article of diet containing the typhoid bacillus, as shell fish, watercress or ice-cream.
- (ii.) An infected milk supply.
- (iii.) An infected water supply.
- (iv.) The absorption of sewer gas in which the typhoid bacillus is present.

We can at once eliminate the two first conditions as the probable cause, for from inquiries made at the patients' houses, in not one instance had there been recently any consumption of shell fish or ice-cream, and in only one case had watercress been eaten during September. It was also found that the milk supply of the infected houses was obtained from various dealers, and that these dealers when not obtaining milk from their own cows had obtained it from different farmers.

With regard to the water supply, I may at once say that we cannot attribute the outbreak to this cause. On looking at the spot map produced which shows the incidence of the disease on the various parts of the town, it will be noted that the area chiefly affected lies closely around a line drawn from the Jetty to the Upper Ferry; the northern part of the town, Cobholm and Gorleston although supplied with the same water, being practically free. Furthermore, not a single case has occurred in any of the large institutions, such as the Naval Hospital or the Workhouse, nor yet in the neighbouring villages of Caister and Ormesby, all of which are consumers of the Water Company's water. I think the water supply from the Water Work's Company is thus absolved from any blame in this matter, if we eliminate the possibility of local pollution.

Private well water also must be left out of consideration as the probable cause, not one house affected obtains its water from this source.

In connection with the water supply it is perhaps as well to mention that on Monday afternoon, October 8th, a meeting of the Water Supply Sub-Committee was held, when the facts of the outbreak up to that time were placed before the members, and it was decided merely as a precautionary measure that samples of water supplied to the town should be analysed by Dr. Stevenson, of Guy's Hospital. These samples I obtained and submitted to Dr. Stevenson, by whom they will be analysed both chemically and bacterially. Dr. Stevenson's report is not yet to hand.

Having thus eliminated three out of the four conditions, there remains but the fourth, viz. : "The absorption of sewer gas in which the typhoid bacillus exists" to account for the present outbreak, and I will endeavour to demonstrate to you that this condition does actually exist, and is in my opinion the direct cause of the large majority of the cases of typhoid fever which occur in this town.

The volume of gas which is given off from sewage is in direct proportion to the length of time in which the sewage is retained in the sewers, the strength of the sewage and the temperature of the air. Very little gas is given off in sewers where, both by reason of sufficient fall and the absence of any impediment to the flow, the sewage is carried rapidly from the house drains to the sewer outfall. Such a happy state of things unfortunately does not exist in our sewers, for by reason of the flat nature of the ground very little natural fall is obtainable and they are likewise during several hours of the day, at the time of high water, if not actually "tide-locked" the flow of sewage in them is so impeded as to be practically stagnant. In the early autumn likewise the strength of our sewage is considerably increased by the influx of visitors and the small amount of rainfall.

If we consider also the increase of temperature which occurred about the end of the second week in September, we have all the conditions

necessary for the evolution of large quantities of sewer gas. All that is needed to complete the cycle is the presence of the typhoid bacillus, and this is obtained from the typhoid patients whose excreta, before the diagnosis of the disease is confirmed, is passed into the sewers without previous disinfection. This bacillus is not given off to the sewer air in fresh sewage, but is scattered by the bursting of bubbles in fermenting stagnant sewage.

By this means our sewers become charged with large volumes of sewer gas containing the typhoid bacillus, very often under considerable pressure, and this gas escapes from the sewers by various outlets ; these outlets in their order as being dangerous to the public health are :—

- (a) Defective house drains, either not intercepted at all or imperfectly intercepted from the sewer.
- (b) Open manhole covers or surface sewer ventilators.
- (c) Defective road-gullies.

(a) In the case of defective house drains which are either not intercepted at all or imperfectly intercepted, I consider the danger is infinitely the greater, as in these cases the sewer air is discharged directly into private houses which become in fact ventilators for the public sewer.

Taking the 24 cases which have occurred during this month, these 24 patients resided in 18 houses. The drainage in each of these houses was tested and was found to be defective in 12 instances, allowing escape of sewer air into the house.

Your Sanitary Inspectors are dealing as rapidly as possible with private drains, but it is a very slow process as we have only one smoke testing machine, and are also compelled to give the Surveyor's Department several hours' notice when we require a labourer to open the ground for the purpose of applying the test. I would suggest that an additional smoke testing machine be purchased, and that a labourer be attached permanently to this Department ; I can assure you that his time would be fully occupied.

Whilst on the question of house drainage, I would also suggest to you the necessity of having the drains of all new houses tested by the "water test" before they are approved. At the present time they are not tested at all, but only "inspected," and with all due respect to the Inspector, I would submit that it is impossible to tell whether a drain is water-tight unless it is tested.

(b) With regard to open manhole covers and surface sewer ventilators, they are an abomination, and should be at once abolished. Sewer air escapes from them at the surface of the ground, and is naturally inhaled

by anyone passing by them. But I would not advise you to do away with them without providing in their place an equal number of shaft ventilators, carried up to such a height as to be free from all windows and chimneys. If they were closed without such provision, I am afraid the pressure in the sewers would be so great that house traps would be forced and the danger aggravated.

(c) In the case of defective road gullies, there are in the town a large number of brick gullies, many of which are, undoubtedly, porous and defective, allowing the water in them to soak away, when they become unsealed and act as sewer outlets. But in the case of those which are not porous, or only so to a small extent, the seal is so small that they are very easily forced by any pressure in the sewers. I have myself repeatedly seen bubbles of gas arising from them from this cause. All these brick gullies should be replaced as soon as possible by earthenware gullies of an approved pattern, such as Sykes'.

In the early part of this month I consulted with the Borough Surveyor as to the immediate steps which should be taken to deal with this outbreak, and as an outcome of this all road gullies are being flushed twice a week with a solution of carbolic acid. This will answer two purposes, by both ensuring the presence of a water seal in each gully, and also by adding to the sewage a certain amount of disinfectant will lessen the production of sewer gas. I would suggest that this flushing should be made a permanent institution.

There is another condition which, although apparently is not responsible for the present outbreak, is in my opinion a strong factor in keeping typhoid fever always with us. I refer to the pollution of the soil on which the town stands, a pollution which is continued even to the present time by the number of privy pits and porous surface drains for slop water which exist. This condition it is impossible to take any drastic measures to eradicate, the most that we can do is to prevent further pollution by abolishing the privies and surface drains, and also to keep down the emanations from the soil by concreting yards, passages, and underfloor spaces. These precautionary measures are being pushed vigorously by the Sanitary Department.

It may be argued that the causes which I have put forward as conducing to our present increase in typhoid cases would apply as well to each of the preceding years, this undoubtedly is true, and I think goes a long way to prove the accuracy of the statements, when we find that for the last seven years there has invariably been during the months of September and October a decided increase in the number of typhoid fever cases notified (see appended table).

In order to prevent confusion I will mention seriatim the various measures which I recommend should be carried out, and I express as my decided opinion that unless such steps are taken we shall be continually subject to the presence of typhoid fever with periodical outbreaks like the present one.

My recommendations are :—

- (a) The flushing at least twice a week of all road gullies with a strong solution of carbolic acid.
- (b) The substitution of Sykes' earthenware gullies or other approved patterns in place of the existing brick gullies.
- (c) To replace existing surface sewer ventilators with shaft ventilators 9 in. by 6 in. carried up to such a height so as to be clear of all windows and chimneys. Such shafts to be erected so as to be fully exposed to the sun wherever possible.
- (d) All drains of new houses to be tested by means of the water test before being approved.
- (e) The purchase of an additional smoke testing machine, and the addition of a labourer to the permanent staff of the Health Department in order that we may deal more rapidly with the defects in private drains.

In concluding this report, I would impress upon you the fact that these present recommendations do not in any relieve you of the responsibility, nor do they interfere at all with the carrying out of a new system for the treatment and disposal of the sewage of the town; and it is imperative for this Council at the earliest opportunity to at once take action, and by creating one point for the reception and disposal of all the sewage, eradicate effectually the risks we run from the present condition of our sewers. Not all the money spent on beautifying the Sea Front will keep our visitors with us, if our reputation as a Health Resort were to become in any way sullied.

A table showing the increase in the cases of typhoid fever which have occurred in the Autumn of each year since 1893 :—

| | 1893. | 1894. | 1895. | 1896. | 1897. | 1898. | 1899. | 1900. |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|
| June .. | 4 | 5 | 5 | 2 | 3 | 7 | 4 | 3 |
| July .. | 10 | 1 | 7 | 1 | 5 | 8 | 2 | 2 |
| August .. | 11 | 5 | 10 | 6 | 15 | 9 | 6 | 9 |
| September | 18 | 7 | 31 | 12 | 10 | 13 | 25 | 10 |
| October .. | 38 | 7 | 28 | 7 | 15 | 26 | 7 | 52 |
| November | 32 | 21 | 21 | 11 | 15 | 28 | 4 | 23 |
| December | 14 | 14 | 20 | 10 | 15 | 25 | 10 | 5 |

The Sanitary Committee, which considered this report, decided to adopt the most important recommendations with the satisfactory result that the outbreak was at once checked, only 7 fresh cases occurring from the 8th November to the end of the year.

Since this Report was presented to you it has come to my knowledge that by far the highest tides recorded in the Harbour throughout the year occurred during the second week of September, this naturally causing the sewage to be retained in the sewers for longer periods than would have otherwise been the case.

Some few of the cases reported earlier in the year were clearly proved to have contracted infection from eating mussels taken from the river in close proximity to the sewer outfalls; and it is regrettable that, notwithstanding the repeated warnings that have been given, people continue to partake of this poisonous mollusc.

ERYSIPelas.

37 patients suffered from Erysipelas during the year and 3 deaths occurred.

PUERPERAL FEVER.

Only four cases of Puerperal Fever were reported during the year, none of which terminated fatally.

MEASLES.

Measles not being included in the list of diseases which are notifiable under the Notification Act, we receive no information as to the actual number of cases which occur; the only information we receive of its prevalence in the town is derived from the death returns every week. Judging from these the town has been very free from measles in comparison with previous years, only 17 deaths having been reported for the year throughout the whole Borough.

WHOOPING COUGH.

The number of deaths from Whooping Cough was 45, distributed as follows:—21 in the Northern District, 7 in the Southern District, and 17 in Gorleston and Southtown. Although

comparatively a fair number of deaths occurred, there was no great interference with school attendance, the deaths being evenly distributed throughout the year.

INFLUENZA.

A very sharp outbreak of this disease occurred during the months of January and February, resulting in the deaths, principally from lung complications, of 69 people, 45 of whom were above the age of 65 years. The Workhouse was particularly unfortunate in regard to this disease, no less than 25 deaths being registered as occurring in that Institution.

It is highly probable that several of the deaths returned under the heading of Respiratory Diseases were in reality due in the first place to Influenza.

DIARRHŒA.

47 deaths from this disease were registered during the year, 44 occurring amongst infants under twelve months of age. (See paragraph on Infantile Mortality.) The number of deaths from this disease is slightly below the average for the past ten years, the average number being 55 yearly.

ANALYSIS OF DEATH RETURNS FROM GENERAL DISEASES.

Pythysis was accountable for 48 deaths during the year, as compared with 62 during 1899. This disease occurred principally among the poorer class population in the over-crowded portions of the town.

General Tuberculosis.—Under this heading there were 28 deaths, the distribution being very similar to those dying from Phthisis.

Cancer caused 55 deaths during the year, 32 being those of persons over 65 years of age.

Respiratory Diseases.—169 persons succumbed to Bronchitis, Pneumonia or Pleurisy, compared with 89 in the previous year. This large increase is in all probability due, as I have

previously pointed out, to the unrecognised presence of Influenza, the subsequent Respiratory trouble being merely a complication of this disease.

Alcoholism is responsible for 17 deaths, 13 of which were those of males.

Deaths from Violence numbered 20 during the year, 3 of which were cases of suicide, and 1 of murder. The number in the previous year was 36.

A tabulated analysis of the deaths registered during the year is appended (see Tables 1, 2, 3, and 4.)

INFECTIOUS DISEASES HOSPITAL.

This Institution has proved of inestimable value during the year in dealing with the various outbreaks of Infectious Disease.

In the case of Infection occurring in the Rows or other over-crowded parts of the Town, it would be impossible to isolate the patients in their own homes, and it is only by their early removal to Hospital that the disease is prevented from spreading.

The cost of maintenance of the Institution should therefore be looked upon practically in the light of the Town's insurance against the occurrence of Epidemics.

The Hospital is constructed on the separate Pavilion system, and is thus enabled to afford complete accommodation for Typhoid Fever, Scarlet Fever and Diphtheria patients, whilst Small Pox patients are isolated at the Gorleston Isolation Hospital, which is situated about $3\frac{1}{2}$ miles from the Town.

During the year 274 patients were admitted into Hospital, viz. :—Diphtheria 75, Typhoid Fever 74, and Scarlet Fever 25, and 52 deaths occurred, (see Table 5.)

A charge for maintenance of one guinea per week is made to all visitors to the Town, and also to those patients removed from houses above the assessable value of £12 yearly; this charge is, however, often abated or remitted altogether if the Hospital Committee are satisfied that the patients or their friends are not in a position to meet the amount. The Corporation received from these charges during the year the sum of £65 4s. 6d.

Several much-needed additions were made to the Hospital buildings during the year; a boiler house was erected for the provision of steam radiators to all the wards and to the Administration Block, the existing open grates being found to be insufficient for maintaining a proper temperature; ten additional drying-closets and steam-heated wash-tubs were placed in the Laundry; a Bacteriological Laboratory was erected in the Hospital grounds, but was not furnished by the end of the year; a Porter's Lodge has also been built to control the entrance to the Hospital.

The Corporation steam disinfector is placed in the Hospital grounds, and during the year the following articles underwent the process of disinfection :—

| | | | |
|-----------------------|----|----|------|
| Beds and mattresses | .. | .. | 461 |
| Bolsters and pillows | .. | .. | 933 |
| Blankets and sheets | .. | .. | 1065 |
| Articles of clothing | .. | .. | 1823 |
| Pillow-slips | .. | .. | 602 |
| Hangings and curtains | .. | .. | 284 |
| Counterpanes | .. | .. | 358 |
| Carpets and rugs | .. | .. | 424 |
| Cushions | .. | .. | 81 |
| Various articles | .. | .. | 644 |
| | | | — |
| Total | .. | .. | 6675 |
| | | | — |

DAIRIES, COWSHEDS AND MILKSHOPS.

During the year a new set of Regulations for the control and management of Dairies, Cowsheds and Milkshops, were drafted and submitted to the Local Government Board for their approval; this was subsequently obtained, and these Regulations have proved exceedingly useful in dealing with the various nuisances and insanitary conditions which existed among several of the Cowsheds and Dairies.

There are upon the Register 31 Cowsheds, 25 Dairies, and 62 Milkshops; 340 visits of inspection were made to these premises, and 16 notices were served to abate various nuisances

and to carry out necessary structural alterations, in addition to many works performed under verbal notice.

COMMON LODGING HOUSES.

Seven Common Lodging Houses appear on the Register; 26 visits of inspection were made to these premises, which on the whole were found to be satisfactory.

SLAUGHTER HOUSES.

There are upon the Register 20 Slaughter Houses, all of which have received frequent visits of inspection during the year, the visits in all numbering 302.

Although by periodical limewashing, frequent removal of offal, and attention to drainage and general cleanliness, much is done to minimise the nuisance arising from these premises, they are by their situation in the heart of the Town and their general construction, necessarily a nuisance, which during the heat of the summer becomes almost intolerable.

I cannot too strongly impress upon you the necessity for early action being taken in the construction of the new Public Abattoir, the plans for which have been approved by the Local Government Board, and a loan sanctioned last year. Upon the completion of these premises the Town would be freed from one of its worst and most ancient nuisances, a batch of these Slaughter Houses, consisting of wooden lean-to sheds abutting on the east side of the Town wall, dating back to the year 1676.

HOUSES UNFIT FOR HABITATION.

During the year 23 Houses were certified as unfit for human habitation, and were closed by the order of the Magistrates.

In 5 of these cases the requirements of the Sanitary Authority were subsequently carried out by the owners and the closing order revoked.

UN SOUND FOOD SEIZED AND DESTROYED.

36 lbs. of Cod Fish; 3 lbs. of Mushrooms; 4½ lbs. of Raspberries; 32 lbs. of Gurnets; 9 cwt. 2 qrs. 7 lbs. of Plums.

In the case of the Cod Fish and Mushrooms prosecutions were instituted before the Magistrates. In the first instance the defendant was fined £1 and costs, and in the second instance 1s. and costs.

The above does not include the amount of fish destroyed at the Fish Wharf, details of which will appear in the Report of the Fish Inspector.

FOOD AND DRUGS ACTS.

During the year 38 samples of various kinds of food have been purchased and submitted for analysis, viz. :—Milk 27 samples, Butter 7 samples, Baking Powder 2, Cheese 1, Coffee 1.

14 samples were found to be adulterated, viz. :—Milk 11, Baking Powder 2, Butter 1.

In the case of the adulterated Milks, 7 prosecutions were instituted, in the remaining 4 cases the per centage of added water not being over 7, the vendors were cautioned only.

Both Baking Powders were adulterated with Alum, and the vendors cautioned.

The following table gives the particulars of the prosecutions.

| Sample. | Date. | Result of Analysis. | Fines. |
|-----------|---------|--------------------------------|------------------------|
| 1. Butter | Jan. 31 | 85 % Foreign Fats | £5 and 22s. 6d. costs. |
| 2. Milk | Jan. 31 | 16 $\frac{1}{4}$ % Added Water | £2 and 22s. 6d. costs. |
| 3. Milk | Feb. 14 | 12 % Added Water | £1 and 26s. costs. |
| 4. Milk | Feb. 14 | 15 % Added Water | £1 and 21s. 6d. costs. |
| 5. Milk | May 19 | 13 % Added Water | £1 including costs. |
| 6. Milk | Aug. 17 | 21 % Added Water | £2 and 20s. 6d. costs. |
| 7. Milk | Aug. 17 | 12 % Added Water | £1 and 23s. 6d. costs. |
| 8. Milk | Aug. 17 | 13 % Added Water | £1 and 20s. 6d. costs. |

HOUSE DRAINAGE.

A most important institution which has taken place during the past year in connection with house drainage is the compulsory testing of the drains of all new houses by means of the Water test, before they are approved by the Surveyor's Department. Previously these drains were only inspected before being passed,

it being impossible to detect defects in them by this means alone. Many of these inspected new drains, soon after being passed, were tested on complaint and compelled to be re-laid by this Department, this naturally being a source of danger and considerable annoyance to the occupants.

The "Water Test" is applied to drains in the following manner:—The out-go of the drain, i.e., the part of the drain nearest the sewer, is sealed, and water is poured into the drain at its highest part until it is filled. It is then left in this condition for an hour, and should the level of the water at the end of this time show any sinking, there must manifestly be some defect in the drain.

This test ensures that the joints of the drain are perfectly sound, and also that the pipes used in its construction are of the best quality.

In order to show the necessity for this test as applied to the drainage of new houses, I quote the following figures, which I have obtained from the Surveyor's Department, of the number of tests made since the institution in November, with the various results:—

| | |
|----------------------------------|-----|
| Total number of Water Tests .. | 206 |
| Number passing the first test .. | 58 |
| ,, ,, ,, second test .. | 36 |
| ,, ,, ,, third ,, .. | 15 |
| ,, ,, ,, fourth ,, .. | 5 |
| ,, ,, ,, fifth ,, .. | 1 |
| ,, ,, ,, sixth ,, .. | 1 |

In addition to the above, there have been applied 228 tests to various house drains, by the Inspectors of the Sanitary Department; out of this number 145 were found to be defective in various ways.

REPORT OF THE INSPECTOR OF NUISANCES.

"I respectfully submit this, my Sixth Annual Report, of the "work accomplished by the Sanitary Department during the year "1900. The particulars of nuisances reported to the Sanitary "Inspection Committee, and dealt with by formal notices, issued

“from the Town Clerk’s Department, also other work of similar nature but carried out by informal notices sent out from this office.”

| | |
|--|------|
| Formal notices served by order of Committee .. | 295 |
| Informal notices served .. | 682 |
| Verbal notices | 256 |
| Complaints received and attended to .. | 447 |
| Houses inspected | 2231 |
| Re-inspections made during progress of works | 5269 |
| Outstanding notices at end of year .. | 140 |
| Notices in hands of Tradesmen .. | 46 |

NATURE OF WORKS COMPLETED.

| | |
|---|-----|
| Privies replaced with water closets .. | 431 |
| New drains laid | 231 |
| Drains partly re-laid | 317 |
| Earthenware gullies fixed | 441 |
| Choked drains cleared | 123 |
| Flushing cisterns provided to closets | 56 |
| Filthy houses cleansed | 29 |
| Offensive accumulations removed | 58 |
| Animals and poultry removed | 22 |
| Polluted wells closed | 30 |
| Overcrowding in houses abated | 3 |
| Cesspools and dead wells closed | 13 |
| Privies reconstructed or repaired | 27 |
| New sinks provided | 131 |
| Drains intercepted from sewers | 47 |
| Rain water cisterns abolished | 78 |
| Rain water pipes disconnected from drains | 81 |
| Under floor spaces ventilated | 67 |
| Damp courses inserted in walls | 62 |
| Yards and passages concreted | 279 |
| Sink, bath, and lavatory wastes disconnected | 36 |
| Cowsheds, dairies and slaughter houses cleansed | 16 |
| Bake-houses cleansed and limewashed | 5 |
| Houses provided with water supply | 47 |

| | | |
|--|----|-----|
| Pan-container closets abolished .. | .. | 18 |
| New soil pipes erected and ventilated .. | .. | 32 |
| Dust bins provided .. | .. | 125 |
| Pedestal wash-down closets erected .. | .. | 42 |
| Water closets fixed to workshops .. | .. | 17 |
| New urinals erected .. | .. | 7 |
| Water closets repaired .. | .. | 22 |
| Roofs and spouting repaired .. | .. | 86 |
| Drains tested .. | .. | 228 |
| Miscellaneous items .. | .. | 53 |

ROUTINE VISITS.

In the following table will be seen the number of offensive trades and other trades, with the number of visits made to each during the year.

| | | No. on Register. | Visits made. |
|--------------------------|----|------------------|--------------|
| Cowsheds .. | .. | 31 | 38 |
| Dairies .. | .. | 25 | 34 |
| Milk shops .. | .. | 62 | 268 |
| Slaughter houses .. | .. | 20 | 302 |
| Knackers' yards .. | .. | 1 | 14 |
| Bone boilers .. | .. | 1 | 66 |
| Tallow melters .. | .. | 2 | 122 |
| Tripe dressers .. | .. | 2 | 41 |
| Gut scrapers .. | .. | 1 | 40 |
| Bakehouses .. | .. | 89 | 266 |
| Marine stores .. | .. | 5 | 32 |
| Common lodging houses .. | .. | 7 | 26 |

In addition to the above trades, &c., 46 visits were made to Fish Curing Works, and 48 to Factories and Workshops.

SAMUEL HASSALL,
Sanitary Inspector.

INFECTIOUS DISEASES.

During the year 280 cases of Infectious Disease were removed to the Isolation Hospital by the Inspectors, 456 visits made to infected houses, and 311 rooms disinfected.

In concluding this Report, I desire to express to you my gratitude for the unfailing courtesy which I have always received during this, my first year of office under you, and also my thanks to my predecessor, Dr. Bately, for the ready help which his intimate knowledge of the Town has enabled him to render me.

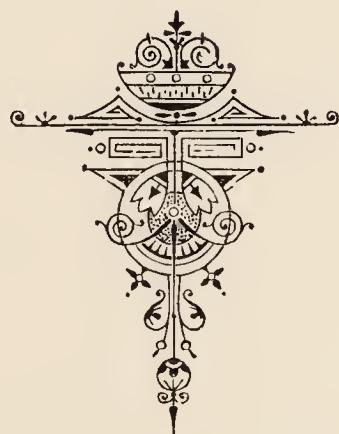


TABLE 1.
FOR WHOLE DISTRICT.

| YEAR. | Population estimated to middle of each year. | BIRTHS. | | DEATHS UNDER ONE YEAR OF AGE. | | DEATHS AT ALL AGES. | | DEATHS IN PUBLIC INSTITUTIONS. | Deaths of Non-residents registered in District. | DEATHS AT ALL AGES. | | | |
|------------------------------|--|---------|--------|-------------------------------|----------------------------------|---------------------|--------|--------------------------------|---|---------------------|--------|-------|-------|
| | | No. | Rate.* | No. | Rate per 1000 Births registered. | No. | Rate.* | | | No. | Rate.* | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | |
| 1890 | 50,272 | 1490 | 29.63 | 271 | 185 | 986 | 19.61 | 102 | 30 | .. | 956 | 19.01 | |
| 1891 | 49,381 | 1547 | 31.32 | 248 | 165 | 1024 | 20.73 | 108 | 12 | .. | 1012 | 20.49 | |
| 1892 | 49,636 | 1372 | 27.64 | 231 | 164 | 1030 | 20.75 | 108 | 21 | .. | 1009 | 20.32 | |
| 1893 | 49,891 | 1417 | 28.4 | 249 | 173 | 980 | 19.64 | 128 | 13 | .. | 967 | 19.38 | |
| 1894 | 50,146 | 1436 | 28.63 | 189 | 132 | 790 | 15.75 | 121 | 36 | .. | 754 | 15.03 | |
| 1895 | 50,401 | 1473 | 29.22 | 269 | 185 | 960 | 19.04 | 140 | 26 | .. | 934 | 18.53 | |
| 1896 | 50,656 | 1438 | 28.38 | 220 | 154 | 872 | 17.21 | 119 | 15 | .. | 857 | 16.91 | |
| 1897 | 50,911 | 1487 | 29.20 | 274 | 184 | 966 | 18.97 | 120 | 17 | .. | 949 | 18.46 | |
| 1898 | 52,000 | 1412 | 27.15 | 306 | 216 | 1124 | 20.86 | 164 | 37 | .. | 1087 | 20.90 | |
| 1899 | 53,000 | 1479 | 27.9 | 251 | 169 | 981 | 18.5 | 173 | 72 | .. | 909 | 17.01 | |
| Averages for Years 1890-1899 | | 50,629 | 1455 | 28.74 | 251 | 173 | 971 | 19.10 | 128 | 28 | .. | 943 | 18.60 |
| | | | | | | | | | | | | | |
| 1900 | 51,250 | 1396 | 27.24 | 277 | 198.4 | 1135 | 22.14 | 205 | 60 | .. | 1075 | 20.09 | |

* Rates calculated per 1000 of estimated population.

NOTE.—The deaths included in Column 7 of this table are the whole of those registered during the year as having actually occurred within the district or division. The deaths included in Column 12 are the number in Column 7, corrected by the subtraction of the number in Column 10 and the addition of the number in Column 2.

By the term "Non-Residents" is meant persons brought into the district on account of illness, and dying there; and by the term "Residents" is meant persons who have been taken out of the district on account of illness, and have died elsewhere.

Area of District in acres (exclusive of area covered by water) 3,568

Total population at all ages .. 49,318

Number of inhabited houses .. 10,977

Average number of persons per house 4.5

At Census of 1891.

TABLE 2.
NAMES OF LOCALITIES.

| YEAR. | NORTHERN DISTRICT. | | SOUTHERN DISTRICT. | | GORLESTON & SOUTHTOWN. | | RUNHAM. | |
|------------------------------|--------------------|-----|--------------------|-----|------------------------|-----|---------|-----|
| | a. | b. | c. | d. | a. | b. | c. | d. |
| 1890 | 21,493 | 611 | 459 | 128 | 17,611 | 454 | 340 | 93 |
| 1891 | 21,143 | 596 | 459 | 104 | 15,839 | 495 | 311 | 71 |
| 1892 | 21,213 | 549 | 519 | 116 | 15,748 | 433 | 317 | 65 |
| 1893 | 21,269 | 551 | 477 | 96 | 15,748 | 454 | 305 | 80 |
| 1894 | 21,370 | 578 | 363 | 73 | 15,780 | 464 | 253 | 63 |
| 1895 | 21,444 | 572 | 440 | 96 | 15,844 | 472 | 324 | 110 |
| 1896 | 21,518 | 501 | 378 | 91 | 15,908 | 473 | 309 | 73 |
| 1897 | 21,571 | 524 | 427 | 94 | 16,000 | 485 | 287 | 83 |
| 1898 | 21,800 | 516 | 505 | 115 | 16,400 | 420 | 335 | 84 |
| 1899 | 22,000 | 491 | 442 | 95 | 16,700 | 517 | 328 | 78 |
| AVERAGES OF YEARS 1890-1899. | | | | | | | | |
| 1900 | 19,767 | 486 | 523 | 121 | 15,427 | 442 | 298 | 79 |
| | 21,482 | 549 | 447 | 101 | 16,258 | 467 | 311 | 80 |
| | | | | | | | 12,415 | 418 |
| | | | | | | | 204 | 67 |
| | | | | | | | 627 | 24 |
| | | | | | | | 612 | 24 |
| | | | | | | | 444 | 245 |
| | | | | | | | 74 | 10 |
| | | | | | | | 3 | 3 |

NOTES.—(a) Deaths of residents occurring beyond the district are included in sub-columns *c* of this table, and those of non-residents registered in the district excluded.

(c) Deaths of residents occurring in public institutions are allotted to the respective localities, according to addresses of the deceased.

TABLE 3.
CASES OF INFECTIOUS DISEASE NOTIFIED DURING THE YEAR 1900.

| NOTIFIABLE DISEASE. | At All Ages. | At Ages—Years. | | | | | | TOTAL CASES NOTIFIED IN EACH LOCALITY. | | | | | | No. OF CASES REMOVED TO THE GREAT YARMOUTH ISOLATION HOSPITAL FROM EACH LOCALITY. | | | | | |
|---------------------|--------------|----------------|---------|----------|-----------|-----------|-----------------|--|--------------------|--------------------------|----------------|------------|-------------------|---|--------------------|--------------------------|----------------|------------|-------------------|
| | | Under 1. | 1 to 5. | 5 to 15. | 15 to 25. | 25 to 65. | 65 and upwards. | Northern District. | Southern District. | Gorleston and Southtown. | Ruham Auxhall. | Workhouse. | General Hospital. | Northern District. | Southern District. | Gorleston and Southtown. | Ruham Auxhall. | Workhouse. | General Hospital. |
| Small Pox | .. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Cholera | .. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Diphtheria | .. | 203 | 2 | 49 | 116 | 21 | 15 | — | — | 101 | 57 | 21 | 19 | — | — | — | — | — | — |
| Membraneous Croup | .. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Erysipelas | .. | 37 | — | 1 | 1 | 5 | 23 | 7 | — | 15 | 10 | 9 | 2 | — | — | — | — | — | — |
| Scarlet Fever | .. | 42 | — | 10 | 27 | 5 | — | — | — | 13 | 17 | 11 | 1 | — | — | — | — | — | — |
| Typhus Fever | .. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Enteric Fever | .. | 123 | — | — | 11 | 57 | 29 | 24 | 2 | — | 30 | 63 | 23 | 3 | 2 | — | — | — | — |
| Relapsing Fever | .. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Continued Fever | .. | 7 | — | — | — | 1 | 3 | 2 | — | — | 1 | 4 | 2 | — | — | — | — | — | — |
| Puerperal Fever | .. | 4 | — | — | — | — | — | 2 | — | — | — | — | 1 | 3 | — | — | — | — | — |
| Plague | .. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Totals .. | .. | 416 | 2 | 72 | 204 | 64 | 10 | 163 | 150 | 69 | 25 | 2 | 1 | 116 | 99 | 26 | 20 | — | — |

*The Isolation Hospital is situated in this District.

TABLE 4.

CAUSES OF, AND AGES AT, DEATH DURING THE YEAR 1900.

| CAUSES OF DEATH. | DEATHS IN WHOLE DISTRICT AT SUBJOINED AGES. | | | | | | | DEATHS IN LOCALITIES (AT ALL AGES). | | | | DEATHS IN PUBLIC INSTITUTIONS. |
|--|---|----------|----------------|-----------------|------------------|------------------|-----------------|-------------------------------------|--------------------|------------------------|------------------|--------------------------------|
| | All Ages. | Under 1. | 1 and under 5. | 5 and under 15. | 15 and under 25. | 25 and under 65. | 65 and upwards. | Northern District. | Southern District. | Gorleston & Southtown. | Runham Vauxhall. | |
| Small Pox .. | — | — | — | — | — | — | — | — | — | — | — | — |
| Measles .. | 17 | 5 | 10 | 2 | — | — | — | 8 | 6 | 3 | — | — |
| Scarlet Fever .. | — | — | — | — | — | — | — | — | — | — | — | — |
| Whooping Cough .. | 45 | 23 | 21 | 1 | — | — | — | 21 | 7 | 17 | — | — |
| Diphtheria & Mem- branous Croup .. | 39 | 1 | 14 | 22 | 2 | — | — | 22 | 10 | 5 | 2 | 29 |
| Croup .. | — | — | — | — | — | — | — | — | — | — | — | — |
| Fever { Typus .. | 12 | — | — | — | — | — | — | — | 5 | 3 | — | — |
| Enteric .. | — | — | — | 3 | 4 | 4 | 1 | — | — | — | — | 8 |
| Other continued .. | 1 | — | 1 | — | — | — | — | — | — | 1 | — | — |
| Epidemic Influenza | 69 | 1 | 3 | 1 | 1 | 18 | 45 | 47 | 18 | 3 | 1 | 25 |
| Chorera .. | — | — | — | — | — | — | — | — | — | — | — | — |
| Plague .. | — | — | — | — | — | — | — | — | — | — | — | — |
| Diarrhoea .. | 47 | 44 | 3 | — | — | — | — | 22 | 12 | 12 | 1 | — |
| Enteritis .. | 12 | 6 | 1 | — | — | 3 | 2 | 4 | 5 | 3 | — | — |
| Puerperal Fever .. | — | — | — | — | — | — | — | — | — | — | — | — |
| Erysipelas .. | 3 | — | — | — | — | 3 | — | 1 | 1 | 1 | — | 1 |
| Other Sceptic Diseases .. | 34 | 2 | 7 | 3 | 3 | 10 | 9 | 14 | 13 | 7 | — | 13 |
| Phthisis .. | 48 | — | 2 | 3 | 12 | 31 | — | 21 | 15 | 12 | — | 4 |
| Other Tubercular Diseases .. | 28 | 11 | 7 | 4 | 3 | 3 | — | 13 | 11 | 4 | — | 5 |
| Cancer, Malignant Disease .. | 55 | — | — | — | — | 23 | 32 | 21 | 28 | 6 | — | 12 |
| Bronchitis .. | 124 | 31 | 20 | 2 | — | 16 | 55 | 55 | 36 | 33 | — | 9 |
| Pneumonia .. | 43 | 13 | 13 | 1 | 1 | 11 | 4 | 22 | 14 | 7 | — | 10 |
| Pleurisy .. | 2 | — | — | — | 1 | 1 | — | — | 2 | — | — | 1 |
| Other Diseases of the Respiratory Organs .. | 6 | 1 | 1 | — | — | 3 | 1 | 4 | 2 | — | — | 1 |
| Alcoholism .. | 17 | — | — | — | — | 14 | 3 | 6 | 4 | 7 | — | 2 |
| Cirrhosis of Liver { | 17 | — | — | — | — | — | — | — | — | — | — | — |
| Venereal Diseases .. | 9 | 7 | — | — | 1 | 1 | — | 2 | 4 | 3 | — | 1 |
| Premature Birth .. | 48 | 48 | — | — | — | — | — | 26 | 9 | 12 | 1 | — |
| Diseases and Acci- dents of Parturi- tion .. | 3 | — | — | — | 1 | 2 | — | 1 | — | 2 | — | — |
| Heart and Arterial Diseases .. | 119 | 1 | — | 4 | 4 | 43 | 67 | 69 | 28 | 22 | — | 33 |
| Accidents .. | 17 | — | — | 3 | 3 | 5 | 6 | 6 | 7 | 4 | — | 4 |
| Suicides .. | 3 | — | — | — | 1 | 2 | — | 2 | — | 1 | — | — |
| Nervous Diseases .. | 23 | — | — | — | 1 | 7 | 15 | 18 | 4 | 1 | — | 20 |
| All other causes .. | 251 | 83 | 19 | 5 | 5 | 27 | 112 | 114 | 57 | 76 | 4 | 27 |
| All causes .. | 1075 | 277 | 122 | 54 | 43 | 227 | 352 | 523 | 298 | 245 | 9 | 205 |

TABLE 5.

SHOWING THE NUMBER OF CASES OF INFECTIOUS DISEASES NOTIFIED DURING EACH MONTH OF THE YEAR, THE NUMBER OF SUCH REMOVED TO THE ISOLATION HOSPITAL AND THE DEATHS PER MONTH.

| MONTH. | DIPHTHERIA. | | | TYPHOID FEVER. | | | SCARLET FEVER. | | |
|--------------|---------------|------------------|----------------|----------------|------------------|----------------|----------------|------------------|----------------|
| | No. of Cases. | No. of Removals. | No. of Deaths. | No. of Cases. | No. of Removals. | No. of Deaths. | No. of Cases. | No. of Removals. | No. of Deaths. |
| January .. | 8 | 6 | 2 | 5 | 3 | 0 | 8 | 5 | 0 |
| February .. | 2 | 1 | 0 | 5 | 3 | 2 | 9 | 7 | 0 |
| March .. | 2 | 2 | 1 | 2 | 0 | 1 | 1 | 0 | 0 |
| April .. | 2 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| May .. | 2 | 2 | 0 | 5 | 5 | 0 | 0 | 0 | 0 |
| June .. | 9 | 7 | 2 | 3 | 1 | 0 | 5 | 5 | 0 |
| July .. | 14 | 13 | 1 | 2 | 0 | 1 | 1 | 0 | 0 |
| August .. | 16 | 13 | 5 | 9 | 8 | 0 | 3 | 2 | 0 |
| September .. | 22 | 18 | 2 | 10 | 6 | 1 | 5 | 3 | 0 |
| October .. | 29 | 23 | 4 | 52 | 28 | 2 | 4 | 2 | 0 |
| November .. | 37 | 33 | 5 | 23 | 17 | 3 | 4 | 0 | 0 |
| December .. | 60 | 55 | 16 | 5 | 3 | 3 | 2 | 1 | 0 |
| Total .. | 203 | 175 | 38 | 123 | 74 | 14 | 42 | 25 | 0 |

TABLE 6.

SHOWING THE NUMBER OF CASES ADMITTED TO THE ISOLATION HOSPITAL DURING 1900.

| DISEASES. | Under 5 years. | Over 5 years. | Recovered. | Deaths. | Remaining. | Payments. | | |
|------------------|----------------|---------------|------------|---------|------------|-----------|-----------|-----------|
| | | | | | | Payments. | Payments. | Payments. |
| Small Pox .. | — | — | — | — | — | — | — | — |
| Scarlet Fever .. | 4 | 21 | 24 | — | 1 | £33 | 0 | 0 |
| Diphtheria .. | 45 | 130 | 122 | 29 | 24 | £10 | 17 | 6 |
| Typhoid Fever .. | 6 | 68 | 57 | 8 | 9 | £21 | 7 | 0 |
| Total .. | 55 | 219 | 193 | 37 | 34 | £65 | 4 | 6 |

TABLE 7.

SHOWING THE COMPARISON BETWEEN THE STATISTICS OF GREAT YARMOUTH
AND 32 OTHER TOWNS.

| NAME OF TOWN. | Popula- tion. | Birth Rate per 1000. | Death Rate per 1000. | Zymotic Rate per 1000. | Infantile Death Rate per 1000 Births. | Average Death Rate, 10 years 1890-99. |
|-----------------------|------------------|----------------------------|----------------------------|------------------------------|---|---|
| Ashton-under-Lyne | 45,000 | 27.4 | 20.1 | 1.9 | 181 | — |
| Barrow-in-Furness | 65,703 | 27.5 | 16.5 | 2.6 | 175 | 15.0 |
| Blackpool .. | 50,166 | 25.2 | 14.3 | 1.7 | 160 | 14.93 |
| Bootle .. | 54,500 | 33.5 | 22.7 | 4.7 | 204 | 20.89 |
| Bath .. | 52,600 | 18.23 | 15.4 | 0.95 | 128 | 18.17 |
| Burton-on-Trent .. | 53,330 | 26.0 | 18.2 | 3.1 | 134 | 16.3 |
| Bury .. | 61,765 | 22.5 | 17.7 | 2.1 | 171 | 21.47 |
| Carlisle .. | 42,800 | 31.6 | 18.8 | 1.4 | 134 | 19.9 |
| Cheltenham .. | 49,000 | 19.9 | 14.0 | 0.57 | 112 | 16.3 |
| Croydon .. | 131,186 | 24.9 | 14.6 | — | 132 | 15.12 |
| Coventry .. | 73,000 | 31.0 | 16.8 | 2.3 | 131 | 17.3 |
| Crewe .. | 44,040 | 32.2 | 15.3 | 1.7 | 138 | 16.15 |
| Dover .. | 40,307 | 27.7 | 17.0 | 2.6 | 138 | 17.2 |
| GREAT YARMOUTH | 51,250 | 27.24 | 20.09 | 3.14 | 198 | 18.60 |
| Hastings .. | 73,000 | 17.6 | 13.4 | 0.79 | 115 | 14.6 |
| Hanley .. | 61,833 | 37.6 | 22.0 | 3.9 | 209 | 20.4 |
| Lancaster .. | 39,198 | 25.2 | 14.05 | 2.06 | 178 | 15.98 |
| Lincoln .. | 45,348 | 27.6 | 19.2 | 1.69 | 154 | 15.8 |
| Macclesfield .. | 36,000 | 23.6 | 19.6 | 1.7 | 188 | 19.7 |
| Maidstone .. | 34,658 | 23.4 | 20.4 | 0.77 | 155 | 20.3 |
| Newport .. | 75,088 | 28.6 | 16.7 | 2.4 | 170 | 17.8 |
| Northampton .. | 69,242 | 22.32 | 13.7 | 1.4 | 144 | 15.5 |
| Reading .. | 72,328 | 26.1 | 14.2 | 1.7 | 144 | 15.15 |
| Rochdale .. | 75,282 | 23.9 | 20.2 | 1.37 | 167 | 19.21 |
| Southampton .. | 107,713 | 27.2 | 16.9 | 1.47 | 152 | 18.0 |
| Southport .. | 52,238 | 18.5 | 15.08 | 0.61 | 144 | 16.61 |
| South Shields .. | 105,677 | 32.9 | 19.4 | 2.17 | 160 | 19.3 |
| Stockport .. | 82,440 | 27.8 | 21.4 | 2.6 | 203 | 22.65 |
| St. Helens .. | 88,480 | 35.03 | 21.6 | 3.04 | 188 | 21.47 |
| Tynemouth .. | 54,070 | 30.49 | 19.8 | 1.92 | 155 | 18.81 |
| Warrington .. | 65,000 | 36.7 | 19.4 | 2.5 | 162 | 20.9 |
| West Bromwich .. | 64,000 | 35.0 | 19.8 | 2.5 | 196 | 19.7 |
| Wigan .. | 63,400 | 34.4 | 21.9 | 2.6 | 190 | 22.4 |

REPORT OF THE SANITARY CONDITION OF THE PORT OF GREAT YARMOUTH.

The limits of the Port of Great Yarmouth are very extensive, and are defined as follows :—

- (1.) The whole of the Littoral, extending from the north, from the Flood Gate at the northern boundary of the Parish of Winterton, to the south at League Hole in the Parish of Corton.
- (2.) The River Yare from its mouth to Breydon Water.
- (3.) Breydon Water.
- (4.) The River Yare from its junction with Breydon Water at the south-western extremity to a straight line drawn from the southern extremity of the common boundary of the Parish of Reedham, and the detached part of the Parish of Moulton at right angles to the adjacent bank of the River, and continued thence across the River to the opposite bank.
- (5.) The River Bure from Breydon Water to a straight line drawn across the River opposite a point where the common boundary of the Parishes of Great Yarmouth and Caister-next-Yarmouth terminates on the east bank of the River.
- (6.) The River Waveney from Breydon Water southward to a straight line drawn across the River at the termination of the common boundary of the Parishes of Burgh Castle and Belton.

Together with all the waters within such limits.

As you only possess one Port Sanitary Inspector, the large extent of the Port would render it impossible for him to exercise efficient control over the numerous vessels within your District were it not for the ready help which has at all times been rendered him by the Customs Authorities, and also by the Coastguards, to both of whom I wish to express my thanks and appreciation of their services.

Luckily, as far as the importation of Infectious Disease is concerned, Yarmouth has very little communication with foreign countries, but as the few vessels which arrive carry no doctor on board extra care is necessary to prevent any infectious cases which might happen to be on board these vessels, being landed in the Port without our knowledge.

The precautions taken to obviate this risk are as follows:— All vessels arriving from foreign are compelled to wait outside the Harbour to pick up a Pilot. These Pilots have received instructions that immediately on boarding the vessel they are to make enquiries as to the existence of any case of sickness on board.

Should any man be reported sick, no matter what the reason given for his illness, such vessel is detained outside, and your Port Medical Officer informed of the fact. A visit of inspection is then made, and the cause of sickness ascertained. This arrangement has been found to work admirably.

At the middle of last year, Dr. Reece, one of the Inspectors appointed by the Local Government Board, visited your Port, and after enquiring into the various arrangements, expressed himself perfectly satisfied with the precautions adopted against the importation of any Infectious Disease.

No case of Infectious Disease occurred on shipboard during the year, but six vessels arrived in the Port with sickness on board.

These vessels were visited immediately on arrival by your Medical Officer, and the causes of illness ascertained to be as follows:—

Jan. 9. S.S. Kyle, a seaman suffering from Syphilis.
Feb. 27. The Ketch, Little Jessie, one man ill from Acute
Rheumatism.
May 30. Brigantine Thomas, a seaman suffering from Syphilis.
Sep. 28. S.S. Pearlmoor, two men ill with Malarial Fever.
Oct. 6. S.S. Active, a fireman suffering from Syphilis.
Nov. 1. S.S. Dungonnel, a seaman ill with Pneumonia.

DEATHS IN THE PORT DURING THE YEAR.

Ten deaths were recorded in the Port during the year, but only one occurred on shipboard, viz., that of a seaman on board the S.S. Dungonnel from Pneumonia. This vessel arrived in the Port on November 1st, and the man died the same day.

The other deaths were all due to drowning, and were classified as follows:—Suicide 2; Accidentally drowned 4; Found drowned 3.

SANITARY INSPECTION.

All ships arriving in the Port are visited as soon as possible after arrival by your Port Sanitary Inspector, who, before proceeding on the routine inspection of the vessel, has the following Certificate filled up and signed by the Master or other person in charge.

COUNTY BOROUGH OF GREAT YARMOUTH.

PORT SANITARY AUTHORITY.

During the year the total number of vessels inspected was 1012, viz. :—

| | | |
|----------------------------|----|-----|
| Vessels from foreign Ports | .. | 236 |
| Vessels Coastwise | .. | 776 |

These vessels belonged to various Nationalities, as follows :—

| | | | |
|-----------|----|----|-----|
| British | .. | .. | 822 |
| Norwegian | .. | .. | 58 |
| German | .. | .. | 39 |
| Swedish | .. | .. | 37 |
| Dutch | .. | .. | 29 |
| Danish | .. | .. | 18 |
| Russian | .. | .. | 7 |
| French | .. | .. | 2 |

Of the total number of vessels inspected 806 were found to be in good sanitary condition, and 206 insanitary ; the following is a summary of the various defects found :—

| | | | |
|--------------------------------------|----|----|----|
| Uncleanly forecastles | .. | .. | 97 |
| Foul water tanks | .. | .. | 85 |
| Filthy water closets | .. | .. | 20 |
| Deficient ventilation in forecastles | .. | .. | 4 |

All these nuisances were remedied by notice before the departure of the vessels.

During the fishing season several complaints reached me of the noxious affluvia caused by the pumping of foul bilge water into the harbour from the fishing boats. The usual printed caution was served upon the Master of each boat, and a watch kept upon them.

One Master was detected in the act of pumping out the bilge water from his boat, and was subsequently summoned before the Magistrates and fined. This prosecution had a wholesome effect, no further complaints of the nuisance being received.

FISH INSPECTION.

The Fish Inspector has made daily visits of inspection to the Fish Wharf during the landing and selling of the fish, and the following is a list of the fish, &c., seized and subsequently destroyed by him with the owners' consent.

| | | | Tons. | Cwts. | Qrs. |
|----------------|-----------------------------|------------------|-------|-------|------|
| 12th February. | 12 boxes of Whiting, | weighing (about) | 7 | 2 | |
| „ „ „ | 2 boxes of Roes | „ „ | 1 | 1 | |
| 30th March. | 1 box of Roe | „ „ | | 2 | |
| „ „ „ | 2 boxes of Gurnards | „ „ | 1 | 0 | |
| 25th April. | 8 boxes of Whiting | „ „ | 5 | 0 | |
| „ „ „ | 1 case of Smoked Haddocks | „ „ | | 1 | |
| 10th May. | 1 case of Smoked Haddocks | „ „ | | 1 | |
| 14th „ | 12 boxes of Gurnards | „ „ | 6 | 0 | |
| 18th June. | 2 barrels of Mixed Fish | „ „ | 3 | 0 | |
| 20th „ | 2 boxes of Cod and Whiting | „ „ | 1 | 0 | |
| 21st „ | 10 boxes of Kippers | „ „ | 1 | 0 | |
| 10th July. | 1 box of Roker | „ „ | | 2 | |
| 12th „ | 2 boxes of Gurnards | „ „ | 1 | 0 | |
| „ „ „ | 1 box of Whiting | „ „ | | 2 | |
| 23rd „ | 4 bags of Whelks | „ „ | 4 | 0 | |
| „ „ „ | 1 bag of Shrimps | „ „ | | 2 | |
| 18th August. | 2 bags of Shrimps | „ „ | 1 | 0 | |
| 1st September. | 1 bag of Shrimps | „ „ | | 2 | |
| 17th „ | 22 swills of Herring | „ „ | 2 | 4 | 0 |
| 18th „ | 1 box of Plaice | „ „ | | 3 | |
| 19th „ | 3 boxes of Gurnard | „ „ | 1 | 2 | |
| 24th „ | 30 boxes of Bloater | „ „ | 3 | 3 | |
| 11th October. | 1 swill of Mackerel | „ „ | 1 | 2 | |
| 16th „ | 2 swills of Herring | „ „ | 4 | 0 | |
| 17th „ | 3 boxes of Skate and Plaice | „ „ | 1 | 2 | |
| 22nd „ | 3 swills of Mackerel | „ „ | 4 | 2 | |
| 2nd November. | 17 swills of Herring | „ „ | 1 | 14 | 0 |
| | | | 6 | 10 | 1 |

The number of lasts of herring landed at the Wharf during the year exceeded the number for last year by 2106 lasts, the figures for the last three years being

| | | | |
|------------|----|----|--------|
| In 1898 .. | .. | .. | 18,392 |
| In 1899 .. | .. | .. | 26,377 |
| In 1900 .. | .. | .. | 28,483 |